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**Testimony before the Subcommittee on Energy and Mineral Resources**
**United States House of Representatives**

**The Vast North American Resource Potential of Oil Shale, Oil Sands, and Heavy Oils - Part 1. June 23, 2005**

Mr. Chairman, thank you. I appreciate your invitation to participate in this hearing. I am Russell George, Executive Director of the Colorado Department of Natural Resources. As the lead state agency responsible for natural resource management, I appreciate the opportunity to provide our perspective on renewed oil shale development in Northwest Colorado.

We are excited to be partners in this effort to move our great nation closer to energy independence. With perhaps as much as two trillion barrels of oil locked in the shales of western states, this vision is achievable in our lifetimes.

As a lifelong resident of "Shale Country", I would like to share some thoughts with you on three decades of lessons learned regarding the impacts and possible tools to manage the development of the resource successfully.

**Background Principle**

The State of Colorado has consistently supported the development of oil shale resources in Northwest Colorado since the Arab Oil Embargo of the early 1970's. Our focus has been on making sure that the projects are fiscally and environmentally sound, and that the communities do not incur extraordinary economic burdens. As history has shown, if development pays its way, the community impacts are less if the projects do not materialize.

**History**

Let me summarize the key elements of the oil shale development cycles of the last three decades.

**Oil Shale Lease Bids**. The federal government leased two tracts in each state – Colorado, Utah, and Wyoming – in the early 1970's. Bonus payments accompanied each of these leases – that determined the winning bid for the lease. Half of those bonus payments were distributed back to the state. The General Assembly established the State Oil Shale Trust Fund and Program which developed planning and coordination mechanisms for federal, state, and local governments and provided funding for designated local government services and projects ($100+ million). The goal was to mitigate the "boom town" syndrome.

**The Energy Mobilization Board**. As the energy crisis worsened in the late 1970's, the Executive Branch of the Federal Government pondered a national board that could declare the development of a resource in the national interest – thus preempting local land use regulations and much of the state permitting process. The Western Governors, in particular, led the effort to oppose this preemptive measure by the federal government. The Board never materialized.

**Synthetic Fuels Corporation**. Congress funded the Synthetic Fuels Corporation to initiate oil shale projects in a manner that would allow several technologies to develop simultaneously. Congress allocated $15 billion in price guaranties and price incentives that were competitively awarded on a multiple year cycle. In a large part, this approach made the federal government a partner in accelerated technology development.

**Joint Review Process**. In response to the national focus on the oil, gas, oil shale, coal and uranium resources in Northwest Colorado, Colorado developed the concept of a Joint Review Process. That process consisted of a centralized facilitation of the permit process at the local, state, and federal level. The Joint Review Process Program determined the timelines of the various required permits, coordinated the scoping process for the environmental impact statements, and facilitated public hearings and public comments. The overall coordination of the effort could allow for the application of several permits for an individual project to occur simultaneously. All the major oil shale projects, associated power plant projects, and coal mines used the Joint Review Process.

**Cumulative Impacts Task Force**. In addition to the permitting and environmental analyses related to the simultaneous development of multiple resources, the State of Colorado was also concerned about the fiscal impact to individual communities and counties in high development areas. To that end, the state developed the concept of the Cumulative Impacts Task Force that modeled the budgets, revenues and expenditures of 104 jurisdictions in Northwest Colorado. The key task was to determine what projects would cause what economic impacts to what jurisdictions in what years based on different population and development scenarios.

The effort proved to be extremely valuable when Exxon closed its Parachute Creek facility. At that time, because of the front-end analysis work, the distribution of energy impact funds, and the use of the Oil Shale Trust Fund, long-term economic impacts were manageable. At the time of the Exxon pullout, only one school district had a multiple hundred thousand dollar residual impact.

**DOE Technology Partnership**. In the late 1980's, Occidental Oil under the leadership of Armand Hammer, proposed the cooperative development of an improved oil shale technology at the C-b Oil Shale Tract in Northwest Colorado. This was to be a 50-50 partnership of Occidental and the Department of Energy. Through the work of the state, the Department of Natural Resources, and the Associated Governments of Northwest Colorado, a seven-year commitment of funds was secured from the Department of Energy for this demonstration project. The other oil shale states contributed to the technology analysis for the project. The primary market was not for processing shale oil into motor fuels, but as chemical feedstocks for other uses. The project terminated upon the death of Armand Hammer when corporate directions were changed.

**Technology and the Environment**

In the 1970's and 1980's, the Project Independence Technology Assessments and the Synthetic Fuels Corporation financial plan focused on both in-situ (in the ground), surface, and modified in-situ technologies. The goal for synthetic fuels was an industry that would convert coal, tar sands, and oil shale to liquid fuels at a level of two million barrels per day by 1992 – the majority of which would have come from western oil shale.

The dimensions of the proposed technologies were immense. A surface oil shale mine associated with a minimum-sized (50,000 BPD) commercial plant would be comparable in size to the largest iron and copper mines in the world. This scale was necessary since it required 2.5 tons of rock to produce one barrel of oil.

Underground (in-situ) processes would have recovered less resource. Such mines would need to produce as much as 100,000 tons of rock each day to support a 50,000 BPD facility. The ore would be processed (retorted) above ground. Disposal of the spent shale in some cases would have filled valleys.

The most advanced technology was modified in-situ. That technology mined a portion of the deposit by conventional methods for surface processing. The remaining shale was then fractured by underground detonations, the rubble ignited, and the oil transmitted to the surface. This process would recover less, but with less surface impact.

As you can see, the surface area requirements for mining, retorting, or spent shale disposal were significant. Costs were enormous even in 1980 dollars – an average of $2 billion for each 50,000 BPD plant. Based on the applicable 1977 Clean Air Act standards, production in NW Colorado would have been limited to 400,000 BPD. Water requirements for a 50,000 BPD facility would require 8500 acre-feet per year of water.

In the end, the oil shale industry collapsed of its own weight – given the volumes of material to be removed and processed, the enormously fluctuating world oil price, and the lack of a consistent national vision for the development of this resource that could focus private capital investment.

While we do not know the specifics of the technologies that may be pursued over the next decade, we do know water availability, materials handling, power requirements, and transportation networks must be assessed in detail and the impacts mitigated appropriately.

**What Worked – What Didn't Work**

If the Federal Government is to contemplate a renewed oil shale effort, it must do so based on the lessons learned over the past thirty years. While the technologies are changing, so are the characteristics of "energy country" in Northwest Colorado.

As in the 1970's, we have record coal production that is straining existing transportation networks. We have record natural gas production levels and increasing permitting for natural gas development. The diverse development of this resource has dotted the landscape, increased truck traffic on county roads, and access to the resource has impacted many private landowners where the surface and mineral estates are severed. Additionally, there is a growing public sensitivity to in-situ activities, such as fracking with "proprietary fluids".

This development overlaps an area with increasing tourism and recreation opportunities and an expanding urban population. Oil shale leasing on top of this existing network of energy development and changing land uses may put more pressure on an already fragile ecosystem and public temperament.

We do not control world oil markets, nor do we control the actions of OPEC. Therefore, the development of oil shale cannot be purely price driven. It must be a commodity of national interest developed on public lands in the national interest. That implies a prioritized use of public lands for the development of specific resources. Federal financial support must be sustainable over several decades to encourage private sector investment. An environmental review process must be thorough. A financial safety net for local governments that

allows for growth to pay its way, and allows front-end financing of some infrastructure needs and analytical tools, is essential.

All this said, the implication is that bonus lease payments from federal leases for local government facilities and services are good. Long-term federal financial support that fosters private investments is good. A coordinated permit process with adequate public input is good. And analytical tools that allow state agencies and local governments to anticipate the timing and amount of revenues for impact mitigation are essential.

What will not work are processes that preempt or supersede local and state land use and environmental permit processes. What will not work is the development of technologies without adequate oversight to insure both public acceptance and environmental compatibility. What will not work is a national effort that does not address financial and infrastructure needs at the local level.

**Colorado Recommendations**

Colorado is excited to be a partner in the development of a resource that is both abundant and in the national interest. But it does intend that technology and environmental oversight be rigorous, that development use the best available practices to minimize impacts, that state and local needs are anticipated and funded, that development on public land be prioritized by resource and by region, and that the cumulative impact of mineral and energy development on both public lands and private lands be mitigated.

**Oil Shale Lands Suitable for Development**. Given the density of natural gas and coal development in some areas of NW Colorado, the need for recreational/wildlife habitat/undeveloped areas, and the network of privately held oil shale lands that did not exist in the last boom, the federal government must determine those areas where oil shale development could be accommodated in a manner that is least disruptive to communities and existing activities. Not all types of resource development can occur everywhere. The carrying capacity of the land, communities and infrastructure must be evaluated. That will determine the suitable areas for coal, natural gas, and oil shale development.

One type of mineral and energy development today, may preclude or limit another type of resource development tomorrow. We cannot forget that a consequence of the oil shale pull-out of the 1980's, and the sustained soft energy market in the 1980's, has been the transformation of the NW Colorado economy from an energy base to a tourism, retirement, second home and recreation base -- and public attitudes have changed as well. That cannot be underestimated if accelerated development is to resume.

The lead federal agency in this new effort should provide this cumulative impact analysis and identification of areas suitable for oil shale development as an element of any development and leasing plan. Furthermore, we should insist that parcels available for leasing should be of sufficient size and number to ensure that operations are commercially viable and similarly situated with lease programs for other mineral and energy resources.

**Oil Shale Lease Bids**. Along with an oil shale lease process that generates front-end revenue and production royalties for the federal government, the 1970's concept of the bonus bid should be applied to any oil shale leases in the future. For the tracts leased in Colorado, a sum of over $100 million was collected and distributed to the impacted counties. This economic cushion is essential to community stability, and the ability to withstand the economic shock of a project termination.

The federal leasing program to be implemented in this new effort should insure that the bonus bid concept continues, and the proceeds are distributed to the state in which the lease is located.

**Federal Financial Support**. Several options have been pursued through the years to fund technology development. Tax credits have been one avenue that proved very successful for coalbed methane development. Incentives like those of the Synthetic Fuels Corporation have been another. The DOE Demonstration Project route like that at Logan Wash is another. And the DOE cost-share like the Occidental C-b Oil Shale Project is another.

Oil shale technology development is still fraught with uncertainty. Once a technology appears promising, it must be field tested. And then limited commercial scale production may occur. Collectively, this could span a decade or more. But the lesson learned from the 1970' and 1980's is that any financial incentive program must have a duration comparable with the timeframes for private investment that include a realistic timeframe for technology development and implementation, or the private dollars will not come.

The Department of Energy should poll the industry prior to the passage of any legislation to determine the adequate minimum timeframe to encourage private investment.

**Coordinated Permitting Process**. Given the economic transformation of NW Colorado in the past 20 years, coupled with the increasing level of natural gas development, a coordinated and integrated permitting process is essential. The environmental and land use permitting process can be complex and time-consuming when all the local, state and federal requirements are considered. Coordinating the process is essential, and cannot be underestimated. For the

requirements in place 20 years ago, the average timeframe to permit an oil shale project was about 42 months. Some processes have become more complex since then -- and certainly public interest is more organized and focused.

As a reminder, the Colorado Joint Review process grew out of the concerns raised over the concept of the Energy Mobilization Board. That Board would have had the power to preempt local and state regulatory requirements in the national interest. The reaction in the West was to coordinate and streamline, not dismantle, the existing process. And it worked. Attempts in recent years to truncate the process have been met with public criticism and lawsuits. Such efforts have proven to be counterproductive to the goal of developing these important resources.

The Colorado Joint Review Process is an option that the federal government should consider fully funding, or partially funding along with industry, to assure a rigorous review with adequate public input and consultation.

**Economic Impact Analysis**. Once the development area is determined, a procedure must be established to evaluate economic impacts at the local level. The federal government should fund, either through the bonus bid process or authorizing legislation, a concept similar to the tools used by the Cumulative Impacts Task Force. This analysis would not only guide the timing of needed permanent and temporary community services and infrastructure, but also allow local governments to establish fiscal tools that would insure that growth could pay its own way.

The true cost of the development of strategic resources such as oil shale must be evaluated not only in the context of their technology and development costs, but also the costs and benefits to the community. Securing a safety net is the primary lesson of the last bust.

**Deleted:** **Colorado Oil Shale Advisory Committee**. If legislation moves forward on this initiative, as Executive Director of the Colorado Department of Natural Resources, I will appoint a Blue Ribbon Oil Shale Advisory Committee to advise me in our response to the proposals of the key federal agencies. It will consist of representatives of the affected local governments, the Colorado Energy Research Institute, the Colorado Mining Association, the Department of Natural Resources, the Colorado Department of Public Health and Environment, the Department of Local Affairs, the Office of Energy Management and Conservation, the Associated Governments of Northwest Colorado, Club 20, and the appropriate Western Slope community and environmental organizations.¶
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Their goals would be to provide technical, economic and social advice on facility siting, cumulative environmental impacts, land use impacts and permitting, economic needs and tools, regulatory requirements, and project timing. ¶
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**Liaison to the Department of Energy**. As Executive Director, I will also designate a liaison to the Department of Energy who will communicate regularly and facilitate discussions as appropriate on issues of importance to the state and Western Colorado.

## Conclusion

It is essential that Congress consider the life cycle of oil shale development as it contemplates a renewed national oil shale effort. Only this view will portray the complete picture, so that the appropriate technology, environmental and economic structures can be defined and funded for a successful long-term effort. I look forward to working with you in the months ahead.

# Appendix A

A Local Government Perspective on Federal
**Oil Shale Research and Development Efforts**

Mr. Chairman and Members of the Committee:

My name is Jim Evans, Executive Director of the Associated Governments of Northwest Colorado (AGNC), representing cities and counties in the 5-county region of Garfield, Mesa, Moffat, Rio Blanco and Routt Counties in Northwest Colorado. On behalf of our local governments I want to express our appreciation to your committee for asking our local government views on the development of oil shale technology.

Our local government association was formed at the start of the last oil shale development cycle as the "Regional Oil Shale Planning Commission" with the specific charge to address the socioeconomic and environmental impacts of a potential commercial scale oil shale industry. Now, renamed as the Associated Governments of Northwest Colorado, we are still concerned with this issue. This time around it appears that our region will need to address the potential growth and infrastructure impacts of oil shale development on top of the socioeconomic impacts already occurring in our region from record levels of natural gas, oil and coal production. With estimates of from 600 billion barrels to 1.8 trillion barrels of recoverable oil from shale in our region, we recognize the national interest in developing the technology for this resource. In particular, the needs identified for the Department of Defense for a secure domestic source of fuel make us realize that the importance of the resource cannot be ignored. We also understand the potential economic benefit development of this resource can play on our national balance-of-trade and G.N.P.

Since more than 80% of the oil shale resource is located on federally-owned public land and recognizing that the future development is driven by national interests, local governments in our region believe the federal government must play a lead role in addressing these socioeconomic and environmental impacts and costs. We do not want to see local governments (and local taxpayers) stuck with the costs of new infrastructure and the mitigation of environmental impacts. So we are pleased to see that your Committee and the Department of Energy as we begin this next cycle in Oil Shale development are addressing these issues up front. This is a refreshing difference than the start of the last cycle. Back then, with an oil embargo facing the country, Congress first responded with a proposal for an Energy Mobilization Board with the power to declare Northwest Colorado as a "National Sacrifice Zone". Fortunately, that proposal did not make it all the way through Congress and as my following testimony indicates, we learned a lot during a fairly painful 18-year boom/bust cycle prematurely attempting to develop commercial scale projects.

This time we appreciate the "Research and Development" type approach being put forward by the Department of Energy, and by the recognition of your Committee up front that you are looking for development of an environmentally friendly technology, and an approach not dependent upon the price of oil.

Because we support your stated approach it gives me the opportunity to say,
"I am from the Local Government, and I am here to help you."

I would like to start my help by submitting for the record the following resolution from Club 20, the community based Colorado organization representing cities, counties, businesses and citizens throughout Western Colorado. This resolution was unanimously adopted by the Club 20 Board of Directors endorsing a Research & Development program as being considered by your Committee.

# Club 20 Support for an Economically Viable

And Environmentally Sound Oil Shale R & D Program

**Whereas** Oil shale may still be the largest untapped resource available for transportation fuels;

**Whereas** the richest deposits of oil shale in the world are located in Northwestern Colorado and Eastern Utah;

**Whereas** a DOE report indicates that oil shale development may still be important for our country's National Security (as an alternative to imported oil) and for our Economic Security (to improve our balance of trade); and

**Whereas** without a well conceived federal R & D program this region may again someday be faced with another crisis oriented commercial scale oil shale program.

**Now therefore be it resolved** that Club 20 supports research and development efforts leading to an economically viable and environmentally sound oil shale program.

**Further**, Club 20 supports DOI/DOE/DOD efforts to develop a national oil shale policy and long-term R & D plans.

Approved, Feb. 15, 2005
Club 20 Energy Committee
Club 20 Natural Resources Committee

Approved, April 1, 2005

## Club 20 Board of Directors

Background: Last Oil Shale Development Cycle 1974-1992

- The last oil shale cycle started with the Arab Oil Embargo in 1974. This was a Sudden Oil Shortage, resulting in long lines at gas pumps, temporary high gas prices, and a staggering impact on the U.S. Auto Industry and U.S. economy, aggravated by gasoline rationing.
- Congress responded in a crisis mode.
- The first industry proposal to local government was: Get out of the way and we will develop Oil Shale! Congress responded with a Proposal for Northwest Colorado to be declared a "National Sacrifice Area", including an Energy Mobilization Board with power to override Federal, State and Local environmental and land use laws. State and Local governments responded on an adversarial basis.
- President Jimmy Carter instead got Congress to establish the Synfuels Corp. with $15 Billion in price guarantees and price incentives.
- In our region 12 projects were underway at peak of cycle (either in planning, permitting or construction).
- An Exxon White Paper suggested a socioeconomic impact of a one-million population increase in NW Colorado by 1990. It appeared that all the construction workers in USA would be required for the effort if all the companies went forward at the same time.
- The Colorado projects reaching construction or testing: Exxon Colony Project, Unocal, Oxy (CB), CA consortium. The DOE Anvil Points facility in the meantime was pretty much abandoned, except for a look at an asphalt additive byproduct.
- The cycle collapse (Bust) started May 2, 1982 with an abrupt Exxon Colony closure. In the Boomtown Blues book, this event was blamed for the U.S. and worldwide recession.
- The Unocal project & Oxy continued their efforts through 1990-92. This somewhat mitigated the "bust" cycle. At the peak of the cycle, the combined population of the 2 most impacted counties (Garfield and Mesa) increased from 1981 to 1983 by 12%, from 112.0 thousand to 125.6 thousand. Then in the next 2 years the combined population dropped back to 111.8 thousand.
- Congress then overreacted and shut down virtually all oil shale research programs, despite recommendations from many sources that research and development activities should continue.

**Was Anything Learned During This Cycle? Yes!**

- Congress in 1975-76 enacted Mineral Leasing Act Amendments at the urging of States and Local Governments. The State share of federal royalties increased from 37½% to 50% with priority for local governments impacted by Mineral Leasing activities, such as Oil Shale, Oil, Natural Gas and Coal.
- Congress enacted Payments-In-Lieu of Taxes (PILT) Act to compensate counties for tax exempt federal land thereby giving direct assistance to rural public land counties.
- States in turn enacted Severance Taxes, also with a priority to address socioeconomic impacts.
- Local governments in turn enacted Major Impact Land Use Mitigation Ordinances.
- The Colorado Joint Review Process (CJRP) was initiated. This was a voluntary program designed to coordinate and speed up federal, state and local permitting.
- Local Government Energy Impact Programs were established by States with the new Revenue from Mineral Leasing and Severance Taxes. These programs today address the ongoing impacts of mineral development. The Energy Impact Program in Colorado actually started with the formation of the Regional Oil Shale Planning Commission (now AGNC) and the enactment of the Oil Shale Trust Fund (OSTF). From the OSTF $75 million plus interest was allocated to NW Colorado counties. The $75 million was Colorado's 37.5% of federal Oil Shale leasing bonuses.
- Negative impacts of the abrupt Exxon Colony Project closure actually resulted in a positive turnaround on State/Local/Industry relationships and communications as Unocal and Oxy proceeded with their projects with local support.
- Local governments also supported continuation of the Unocal and Oxy projects, including proposals to turn them into federal oil shale technology demonstration projects.
- Support for a Federal Oil Shale R & D program was generated in Colorado, Utah, Wyoming, Kentucky, Illinois and California, but to no avail.
- New Paraho Corp. temporarily continued oil shale asphalt testing at Anvil Points to demonstrate the byproduct approach to make oil shale economically viable. Some of the asphalt test strips are still in place with no repairs required.

Local Government Advice to Industry for the Next Oil Shale Development Cycle: Communicate! Communicate! Communicate!

The Shell Oil Shale Project is on the right track. Shell Oil is the only company in Colorado who is currently continuing with field-testing. Local governments appreciate these efforts. Their efforts have included ongoing meetings with County Commissioners, Cities, school districts and citizen groups. They have sponsored and organized town meetings. These were very successful from a local perspective. These should continue at the beginning of each phase of an R & D program.

The Department of Energy also appears to be on the right track. The Naval Petroleum and Oil Shale Reserve Office of DOE has prepared a well documented and thorough report indicating the National interest in developing the oil shale resource (trade deficit impact on the economy and national defense interest in a secure oil source.) We believe addressing the socioeconomic and environmental issues in the DOE proposal for a National R & D program and demonstration facility is on target. Virtually all groups and industry involved in the last oil shale cycle have recommended the need for an ongoing federal oil shale research program.

These Groups and individuals back in 1991 were: The Rocky Mountain Oil & Gas Association, The Western Oil Shale Action Committee, Club 20, Associated Governments of Northwest Colorado, The Garfield County Citizen Alliance, Governor Roy Romer, Senator Tim Wirth, Representative Ben Campbell, The Rebuild America Foundation, The Alternate Energy Research Institute, and The Rocky Mountain Institute. There may have been others. These were the ones that I was aware of.

## Recommendation to Address the Socioeconomic Impacts of the Next Oil Shale Cycle

With the renewed interest in oil shale development, the Department of Energy needs to provide funding for socioeconomic programs to:

- Assemble and update impact data from the last cycle.
- Identify appropriate computer systems/models to assess projected impacts.
- Development of baseline economic data for current activities.
- Help identify and provide revenue streams for local/state government services/infrastructure potentially impacted by oil shale development.

DOE also needs to identify and recommend appropriate federal, state and local policies to encourage prudent and environmentally sound oil shale development.

<u>Recommendation to Address Environmental Impacts of Oil Shale Development</u>

The DOE Demonstration program/projects should address:

- Surface disturbance impacts and ongoing reclamation requirements.
- Air Quality impacts.
- Water Quality and Quantity impacts.
- Wildlife protection and mitigation requirements.
- Employee health, safety and training needs.

Regular communications with news media and environmental groups should address the potential environmental impacts of various oil shale technologies.

The Colorado Department of Public Health and Environment should be actively involved in monitoring air quality and water quality impacts.

The State of Colorado Department of Natural Resources and its Wildlife Division should be actively involved in these reclamation and wildlife issues.

The Department of Interior should develop a leasing program to accommodate access to oil shale for research and demonstration project purposes. Any commercial scale leasing proposals must include provisions that recognize the "carrying capacity" concepts for socioeconomics and the environment that are part of the BLM Piceance Basin Resource Management Plan.

<u>Recommendation to Provide the Funding for Oil Shale Research Costs and Incentives</u>

We believe it is fortunate that Congress may have already provided a potential source of funding for Oil Shale R & D efforts. This revenue may be currently available from the Naval Oil Shale Reserve (NOSR) lands themselves located in Northwest Colorado. As indicated in the attached letter from the Department of Interior, some $43.7 million may be accumulated by March 2007 in a U.S. Treasury account from the current natural gas leases on their NOSR lands. These NOSR lands were transferred by Congress from DOE to the Department of Interior with a Congressional priority established for natural gas leasing.

Some of these funds, estimated at $5.8 million, are earmarked for environmental cleanup of the Anvil Points spent shale pile. Otherwise, we believe Congress has the opportunity for the remainder of these funds to be made available to address the socioeconomic and environmental aspects of oil shale development in Northwest Colorado.

In the future, more revenue should be available from this source. According to industry estimates, additional leasing of the NOSR lands could produce leasing bonuses of up to $360 million (to be shared 50% federal and 50% state) plus ongoing production leases of an estimated $32 million annually for at least 20 years. That would be another $640 million total also to be split 50/50 federal and state. Congress should establish a priority to address oil shale

and other energy development impacts in Northwest Colorado from these leasing revenues.

We believe this type of funding is necessary to make sure the DOE research and demonstration projects can proceed without interruptions from fluctuations in the price of oil.

Thank you for this opportunity to testify. I would be happy to answer any questions you may have.

Jim Evans, AGNC Executive Director